KP-300 / KP-300T
SIDE MOUNT
PROGRAMMABLE KEYPAD
USER'S MANUAL

POSIFLEX

Rev.: B0

FCC Notes:

This equipment generates, uses, and can radiate radio frequency energy and, if not installed and used in accordance with the instructions manual, may cause interference to radio communications. It has been tested and found to comply with limits for a Class A digital device pursuant to subpart J of Part 15 of FCC Rules, which are designed to provide reasonable protection against interference when operated in a commercial environment. Operation of this equipment in a residential area is likely to cause interference in which case the user at his own expense will be required to take whatever measures to correct the interference.

Warranty Limits:

Warranty terminates automatically when any person other than the authorized technicians opens the machine. The user should consult his/her dealer for the problem happened. Warranty voids if the user does not follow the instructions in application of this merchandise. The manufacturer is by no means responsible for any damage or hazard caused by improper application.

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GENERAL DESCRIPTION

OVERVIEW

Table below indicates construction of this series of security devices.

Model	KP-300	KP-300T
Application as side mount kit to…	KS-6115/KS-621X/ KS-631X series	KS-661X/ KS-731X series
Programmable keypad	Vertical layout	
Magnetic stripe reader	Optional	
Smart card reader	Optional	

OPTIONS

Items underlined below means that this item must be installed by Posiflex authorized distributor only and never by average user.

- Magnetic Stripe Reader (USB interface)

  * ISO 7811 reader head for tracks 1 and 2

  * ISO 7811 reader head for tracks 1, 2 and 3 + AAMVA + CA DMV

  * JIS/II reader head

- Smart card reader

- Sound ports for KP-300

INSTALLATION GUIDE

UNPACKING CONTENTS

Items packed in for	Qt'y
The side mount programmable keypad itself	1
Posiflex product information CD	1
Transparent key caps for single key	20
Key clip	1
Control keys (4 pcs / set)	1
Legend sheets (4 sh. / set)	1
This manual	1

Note: Utility drivers for KP-300 / KP-300T can be found in the CD or DVD packaged or please find for latest updates by visiting driver download page of our web site:*http://www.posiflex.com.tw/DriversDownload.asp*

MECHANICAL FIXATION

For the KP-300 / KP-300T to be installed in the KS series host system, the upgrade kit is installed to the right edge of the LCD panel. You may find two screw holes on back of the right side of the main unit of KS series as circled in the right picture. Remove these 2 screws to remove the cover for side mount upgrade kit as arrowed in same picture. Take out the cable inside this cover as circled in lower right picture and then connect it to connector inside the side mount upgrade kit KP-300 / KP-300T as arrowed in same picture. Gently arrange the excessive length of this cable back in the hole and use the 2 original screws to fit KP-300 / KP-300T back to the position originally occupied by the cover as in the left picture. Please reserve the cover if there is chance to have the side mount kit removed in the future.
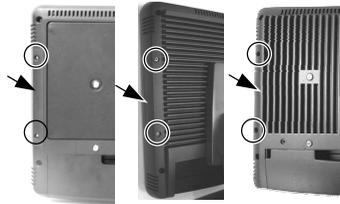
KEYTOP LAYOUT

Keytop Replacement

The keypad in KP-300 / KP-300T is organized into 2 parts: a 4 by 4 numerical keypad area and a 4 by 6 matrix minus a 2 by 2 square recess programmable keypad area. However, this keypad allows some layout

alterations by the system integrator. Besides the standard single key installed, there are double keys and blank keys for purchase to provide more convenient user interface.

When replacement of keytop is required, it is advisable to use a flattop (minus sign) screw driver (Do not use the attached key clip for this operation.) to help getting the key top off gently. Please always first orientate the key tops as below before inserting any keytop into the case of the keypad. **Failure to do so could result in permanent damage not covered in product warranty.** Please always match the latching tab on bottom stem of keytop with the tab in guiding hole and gently press the key top down till a click sound is heard as indicated in the pictures below.

Tab in the guide hole

Single key top   Double key top

Latching tab
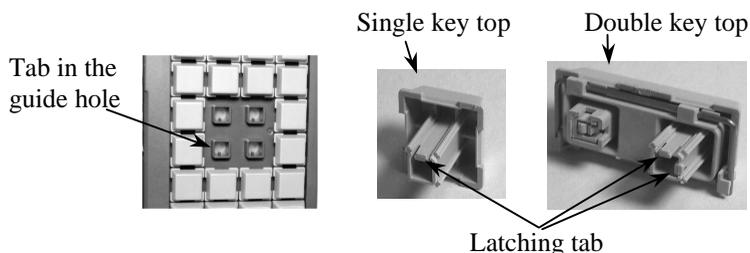
Labeling On Keytop

The programmable keypad is provided with an easy and durable method for reminding the user of content programmed in each programmable key. First preprint (or write) in each cell of the attached colored legend sheet the "name" for each key. Stick each cell to the corresponding keytop and then put on the transparent key cap from the accessories. In this way, the labeling will be protected and resistant to scratch or rubbing.

When re-labeling is required, please use the attached key clip to hook up the transparent key cap and change the label then re-cap.

KEYPAD PROGRAMMING

The programming of the keys above the numerical keypad in KP-300 / KP-300T is in general the task of the system integrator and not the average end user. For end user, please go to the chapter of "OPERATION GUIDE" of this manual directly.

Utility Installation

In the Posiflex Product Information CD attached with KP-300 / KP-300T, there is a subfolder named as "\Drivers\KP" or please download from our web site: *http://www.posiflex.com.tw/DriversDownload.asp* the keypad programming utility for KP-300 / KP-300T.

In the above mentioned subfolder please find a further subfolder "uKBW_xxx" with "xxx" representing any number of the utility revision. This

is a Windows utility for the USB interface KP-300 / KP-300T. Execute "uKBW_xxx\SETUP.EXE" to install the programming utility "uKBW.EXE" for various editions of Windows OS. After completion of the "Setup", there will be a program group "Posiflex Tools" in the program files. Clicking the program "Posiflex USB Programmable Keyboard" in this group will activate the uKBW.EXE for KP-300 / KP-300T. Please select the right model when entering the program if questioned by the program.

Keypad Programming

A normal keyboard may be required for inputting data in keypad programming. In the command menu of the programming utility, "Keyboard" => "Read" or "Write" can be used to transfer the current content in KP-300 / KP-300T to the program memory or vice versa. "File" => "Open" or "Save" can be used to edit an existing template file or preserved the current program content to a template file. "View" command alters the key map page corresponding to the position of control key. The rightmost column in key map for Page 1 refers to the answer back codes for the control key.

Right click (or left click to select a key and followed by a "Return" key of normal keyboard) in the key map starts editing the selected key. Select another key or press "Down Arrow" of normal keyboard finishes programming of that key. Remember to "Keyboard" => "Write" or "File" => "Save" before exiting the program otherwise everything worked will be lost.

Quick Reference Guide for Programming a Key

Please refer to our web site for every detail in programming the programmable keyboards or keypads. The following simplified guide severs as a concise tool for instant application.

Keys To Program	How to Program Them
Esc, Enter, Tab, Back Space, Caps Lock, Menu, Window, F1 - F12, Shift, Ctrl, Alt, Arrow Keys and All Functions like: Print Scrn, Scroll Lock, Pause, Insert, Delete, Home, End, Page Up, Page Down	Right click in the key editing area and select the desired key from the menu/submenu appeared
A - Z, 0 - 9, ~ ` ! @ # $ % ^ & * ( ) - _ = + } { [ ]	\ ' ; " : /. , < > ?	**Press:** "Desired Key or Keys" of the normal keyboard

Hardware Limitation in Programming

In case of "multiple combination key" application which means pressing three or more keys at the same time to obtain certain data output from the keypad, there could be some limitations inherent from the nature of keypad structure. The CPU of keypad detects the contact between the "horizontal" and "vertical" lines for each key press, recognizes which key is pressed and sends correspondent data to the host computer. When there are many keys pressed at the same time, and the pattern of the contacts coincides with some special relationship, there are chances that the CPU of keyboard be confused about exactly which keys are pressed. The user may change the locations of the key-definition to prevent this once such confusion happens.

MSR CONFIGURATION

Please find the subfolder "\Drivers\KP\USBMSR_xxx" in the Posiflex Product Information CD or DVD or download from our web as mentioned earlier and execute the "SETUP.EXE" to install the USB MSR manager under Windows OS. The USB MSR manager can control parameters like individual track enable/disable, Alt+Num emulation and Start/end sentinel substitute.

SMART CARD READER DRIVER INSTALLATION

Please find the subfolder "\Drivers\KP\SC200" in the Posiflex Product Information CD or DVD or download from our web as mentioned earlier. Execute the "SETUP.EXE" to install the driver into the Windows OS. The reader is PC/SC 1.0 compliant. The reader is also EMV level 1 compliant. The smart card reader is also supported by Microsoft CCID generic class driver.

OPERATION GUIDE

KEYPAD LAYOUT
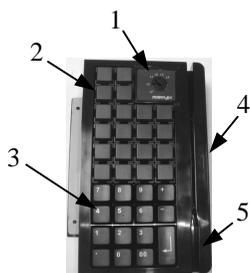
Front View
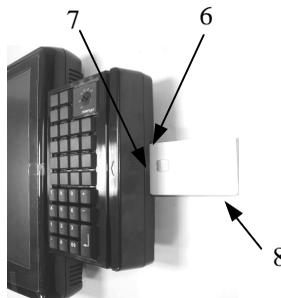
Front Right Side View

1. 6 position lock switch for electronic control key
2. Multi-page programmable keys
3. Numerical keypad
4. MSR mark
5. MSR slot
6. Smart card reader slot
7. Smart card reader mark
8. Example smart card to be read

PROGRAMMABLE KEYPAD

Electronic Control Key

On top right corner of KP-300 / KP-300T, there is an electronic control key that can be turned to one of the following 6 positions: LP, L0, L1, L2, L3 and L4. It can only be taken out from the switch at positions L0 and L1. The purpose of this electronic key serves 3 folds: When the key is switched to (and extracted from) position L0, the keypad output (excluding the optional MSR and the optional smart card reader) will be blocked off by hardware to work as a security measure. A programmable answer back code for the final position of the 6 position electronic key will be sent by the keypad to the host computer whenever the key is switched to a new position for a programmable delay time or when the host computer sends a specific code (E7h) to inquire the keypad. The position of the electronic key determines which page of the key content table for the 20 push keys applies, while the definitions of the same key within different pages can be programmed so absolutely independent to provide instant menu change over.

This electronic key switch is delivered with a set of 4 pcs of keys,

each marked as "PRG", "REG", "Z" and "GT". The effective range of each of the 4 keys can be illustrated by the following table and drawing.

	PRG	REG	Z	GT
LP	Y	N	N	N
L0	Y	Y	Y	Y
L1	Y	Y	Y	Y
L2	Y	Y	Y	Y
L3	Y	N	Y	Y
L4	N	N	N	Y
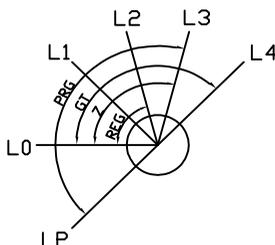
Programmable Keys

The multi-page programmable keys can deliver to the host system the string of keyboard input as programmed. Please note that when the 6 position electronic control key is turned to a different position, the content of same key could be completely different. It is also possible to use combination keys if programmed to. There will be no output of these keys if the control key is turned to "L0" position.

Numerical Keypad

The numerical keypad is durably pre-marked. When the 6 position electronic control key is turned to a different position, the content of same key remains unless it has been programmed in a particular way. The numerical keypad is not applicable in combination keys. There will be no output of these keys if the control key is turned to "L0" position.

MAGNETIC STRIPE READER (OPTION)

For magnetic stripe card reading, be sure to insert the card to the bottom with magnetic stripe facing the mark aside the slot. The movement of the card can be either inserting the card from the top surface then sliding the card down out of the slot, or sliding the card upward from the lower side of the slot till it reaches the top end as long as the card is a standard one. A non-standard card recorded without complete degaussing prior to recovery may accept only one direction in card reading.

The magnetic stripe reader in KP-300 / KP-300T connects to the host through USB port as an USB KB and therefore requires no driver installation to get it working.

SMART CARD READER (OPTION)

Card Insertion

For smart card reading, please insert the end of the smart chip first and have the chip facing upward and toward the mark aside the side slot of KP-300 as in the example picture in front right side view.

Applicable Smart Card Type

The smart card reader can be used for both asynchronous and synchronous type smart cards. For asynchronous type smart card, it reads the card with $T = 0$ and $T = 1$ protocols up to 340 Kbps of EMV and ISO modes. For synchronous type smart card, coverage includes: 2-wire (SLE4432/42), 3-wire (SLE4418/28) etc.

SOUND PORTS (OPTION FOR KP-300 ONLY)

The audio port in KS system is arranged to have an internal audio speaker with maximum audio power of 2 W at lower left corner of the main unit but no direct access port in the main unit. The external access to audio ports can be found in the side mount option kit KP-300 with a Microphone in and a stereo line out jacks at its bottom surface as circled in the right picture. The internal speaker will be automatically disconnected when a plug is inserted in the line output jack.

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